FUTURE FISHERIES IMPROVEMENT PROGRAM GRANT APPLICATION

(please fill in the highlighted areas)

I.	APPLICANT INFORMATION					
	A.	Applicant Name: Jim Olsen				
	В.	Mailing Address: 1820 Meadowlark Lane				
	C.	City: Butte State: MT Zip: 59701				
		Telephone: 533-8451				
	D.	Contact Person: Same as above				
		Address if different from Applicant:				
		City: State: Zip:				
		Telephone:				
	E.	Landowner and/or Lessee Name (if other than Applicant): Montana Fish, Wildlife and Parks, Mt Haggin WMA				
		Mailing Address:				
		City: State: Zip:				
		Telephone:				
II.	PROJECT INFORMATION*					
	A.	Project Name: French Creek Fish Barrier Construction				
	River, stream, or lake: French Creek					
		Location: Township 2N Range 12W Section 16				
		County: Deerlodge				
		200 <u>200</u>				
	B.	Purpose of Project: Construct a fish migration barrier and restore non-hybridized westslope cutthroat trout and Arctic				
		grayling upstream of the barrier.				
С	. В	Brief Project Description				

I.

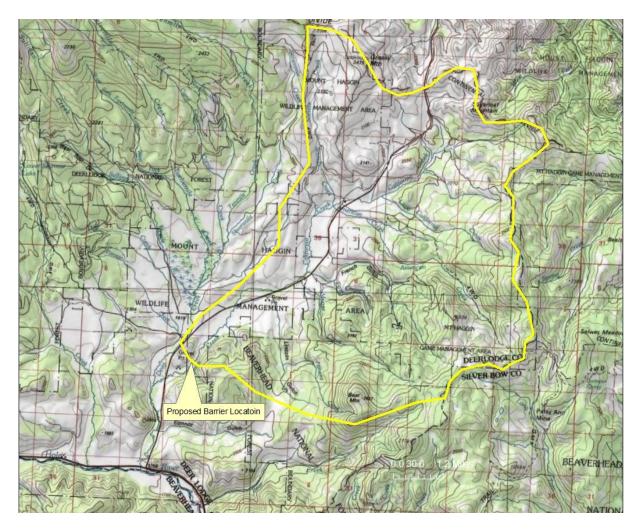
The overarching goal of this project is to restore the native fish assemblage and habitat in French Creek, a tributary to Deep Creek and the Big Hole River. The French Creek drainage lies on lands owned and managed by FWP (Mount Haggin Wildlife Management Area), US Forest Service and BLM. The task that will be accomplished and the purpose for this grant is the construction of a fish migration barrier near the mouth of the creek on Mount Haggin Wildlife Management Area to prevent upstream fish passage. There are approximately 38 miles of habitat upstream of the proposed fish barrier site that are currently occupied by trout. Construction would commence in the fall of 2014 if adequate funding is obtained. Once a fish barrier is in place, non-native brook trout and rainbow trout would be removed from the stream and native westslope cutthroat trout and Arctic grayling would be reintroduced. The Big Hole is the last remaining location where aboriginal fluvial Arctic grayling persist. Construction of a fish barrier is one of the tasks in the larger scale restoration of the watershed which includes habitat restoration.

Pioneer Technical was contracted in the spring of 2013 to develop a design for the proposed fish barrier. An 80% design and cost estimate was completed in June 2013 (see attached). The design specifications for the barrier include being structurally sound during a 100 year flood event and preventing fish passage up to a 50 year flood event. The barrier would be constructed in a small confined reach of French Creek near the downstream boundary of the Mount Haggin Wildlife Management Area. The riprap for the project would be obtained on site from the talus hillslopes. The fill for the barrier would be obtained from French Gulch located a few miles upstream. This area was placer mined and dredged and the dredge spoil piles will be used for fill material. The dredge piles have been tested for the presence of mercury and some mercury was found in a specific area but other areas were mercury free. We plan on using fill from the area free of mercury. The dredge spoil material will be removed in conjunction with the restoration of stream and floodplain function in French Gulch (a separate project).

The Big Hole is the last remaining drainage where aboriginal fluvial Arctic grayling remain in the lower 48 states. The majority of stream miles upstream of the proposed fish barrier in French Creek would be considered a "C" type meandering stream channel with high quality pools and abundant willows. This type of habitat is very similar to the type of habitat present farther upstream in the Big Hole River watershed where grayling are present. To the best of our knowledge, a restoration project of this type and scale has never been attempted for Arctic grayling. However, reintroduction efforts in similar sized streams in southwest Montana (i.e., Ruby River) suggest that such introductions can be successful. In addition, if grayling become established, the role of non-native trout on the survival of Arctic grayling will be better understood. If successful, French Creek would represent the largest tributary population of fluvial Arctic grayling in the Big Hole drainage and the only population within their native range to exist in the absence of non-native fish.

According the FWP Statewide Fisheries Management Plan (FWP 2012), the restoration goal for WCT east of the Continental Divide (Upper Missouri River Basin upstream from and including the Judith River) is to restore secure conservation populations of WCT to 20% of their historic distribution. Populations of WCT are considered secure by FWP when they are isolated from non-native fishes, typically by a physical fish passage barrier, have a population size of at least 2,500 fish, and occupy sufficient (5 to 6 miles) habitat to assure long-term persistence. Estimates of the historic distribution of WCT within the Upper Missouri River Basin are approximately 19,000 stream miles. Therefore, having 3,800 miles of secure conservation populations within the basin would satisfy this 20% goal. Accomplishing this goal for WCT would assure persistence of subspecies in the Upper Missouri River Basin for the foreseeable future, provide numerous fishing opportunities for Montana's state fish, and leave unchanged the vast majority of fisheries that have developed for non-native trout. In the Big Hole the 20% target goal represents approximately 420 miles of stream occupied by secured WCT populations. Therefore the French Creek project would result in achieving nearly 10% of this goal.

With the construction of a fish barrier and removal of non-native trout, 38 miles of stream will be restored to native westslope cutthroat trout and Arctic grayling. Once restored, the French Creek population would represent one of the largest interconnected populations of westslope cutthroat trout in the upper Missouri River drainage and the only population of fluvial Arctic grayling that would exist in the absence of non-native species. Further, with the completion of future projects the habitat impacted by past mining and other activities will be restored and the fishery will reach its full potential.



Map of the French Creek drainage showing the location of the fish barrier. Detail is approximately 10 miles south of Anaconda, MT.



Location of proposed barrier site at the downstream end of Mount Haggin Wildlife Management Area.

Length of stream or size of lake that will be D. treated:

38 miles of stream upstream of barrier

E. Project Budget:

Grant Request (Dollars): \$ \$73,000

Contribution by Applicant (Dollars): \$ In-kind \$ \$110,000 (fill/riprap)

(salaries of government employees are not considered as matching contributions)

Contribution from other Sources (Dollars): \$ \$145,000 In-kind \$

Total Project Cost: \$ \$328,000

- F. Attach itemized (line item) budget see template
- G. Attach specific project plans, detailed sketches, plan views, photographs, maps, evidence of landowner consent, evidence of public support, and/or other information necessary to evaluate the merits of the project. If project involves water leasing or water salvage complete <u>supplemental</u> questionnaire (fwp.mt.gov/habitat/futurefisheries/supplement2.doc).
- H. Attach land management and maintenance plans that will ensure protection of the reclaimed area.

III. PROJECT BENEFITS*

A. What species of fish will benefit from this project?:

Westslope cutthroat trout and Arctic grayling

B. How will the project protect or enhance wild fish habitat?:

The project will protect approximately 38 miles of stream from the threats of hybridization and competition from non-native fish species.

C. Will the project improve fish populations and/or fishing? To what extent?:

This project will nearly double the amount of secured stream in the Big Hole for WCT and will restore Arctic grayling to formerly occupied habitat. Once the restored fishery becomes established, fishing opportunities will remain the same pre and post project completion. French Creek will present a unique opportunity to angle for native fish in their native habitat. French Creek is highly accessible because it almost entirely on public property and has a highway that parallels the drainage. Because of its accessibility and the low-gradient, high quality habitat, it receives some angling pressure (2009 Statewide Angling Pressure Estimate did not list French Creek as receiving any angling pressure, but anecdotal evidence suggest some angling does occur). As habitat projects are completed and the fishery restored, it is likely that overall fish numbers will improve in the stream.

D. Will the project increase public fishing opportunity for wild fish and, if so, how?:

The existing brook and rainbow trout fishery in French Creek is a wild fishery. The goal of the native fish restoration is for westslope cutthroat trout and Arctic grayling to become self-sustaining (wild). Therefore, there will be no net increase or decrease in opportunity to fish for wild fish.

E. If the project requires maintenance, what is your time commitment to this project?:

Maintenance will include periodically (annually) checking the barrier for debris build up and periodically monitoring (once every 5-10 years) the fish population upstream of the barrier.

What was the cause of habitat degradation in the area of this project and how will the project F. correct the cause?:

Factors affecting the fish populations in the French Creek drainage include habitat alteration related to past mining activities, atmospheric deposition from the Anaconda smelting operations and impacts from grazing. Each of these is being addressed as part of the overall watershed restoration. Several tributary streams and a short portion of the mainstem of French Creek have been impacted by past placer and dredge mining. FWP working the Deerlodge Conservation District, Montana Department of Natural Resources and Conservation, Montana Trout Foundation, the Montana Chapter of the American Fisheries Society the Big Hole Watershed Committee and Morris and Maerile Inc. are currently developing a plan to restore 3 miles of French Gulch that was impacted by past mining activities. In addition, a similar plan is being developed for Moose Creek and a short reach of French Creek. The Montana Natural Resource Damage program, Montana Department of Environmental Quality, FWP and the Big Hole Watershed Committee are developing a plan to revegetate and restore areas impacted by atmospheric deposition from Anaconda smelting operations in the headwaters of California Creek (a tributary to French Creek). The impacts from these operations include loss of vegetation, increase in metals such as arsenic and copper and significant gully erosion. Sediment generated from unvegetated areas in the uplands of California Creek flows down steep gullies to the stream causing significant sedimentation and impacts to aquatic life. Experiments have been conducted and a large scale revegetation and sediment retention plan will be developed in the winter of 2013-2014. Construction of a fish barrier will not address any of these habitat-degradation causes; however, the habitat improvement projects will be pursued once project designs are completed and funding is obtained for implementation. The newly established native fish community will be enhanced by these future habitat improvement projects.

G. What public benefits will be realized from this project?:

The public benefit of the project is the long-term conservation of native cutthroat trout, Montana's state fish and Arctic grayling. Both fish are species of concern in Montana and are at risk due to a variety of reasons. Large scale projects such as the one proposed in French Creek will greatly aid in the conservation of these two species and will provide opportunities for anglers to catch native fish in their native habitat. This and similar restoration projects also reduce the likelihood of westslope cutthroat trout and/or Arctic grayling being listing under the Endangered Species Act.

Will the project interfere with water or property rights of adjacent landowners? (explain):
 No, nearly the entire project is located on public property (FWP, BLM, USFS). The owners of small private in-holdings within the WMA have been contacted and given their consent to the project.
 Downstream landowners have also been contacted about the project and given their consent.

I. Will the project result in the development of commercial recreational use on the site?: (explain):

No.

J. Is this project associated with the reclamation of past mining activity?:

No.

Each approved project sponsor must enter into a written agreement with the Department specifying terms and duration of the project.

IV. AUTHORIZING STATEMENT

I (we) hereby declare that the information and all statements to this application are true, complete, and accurate to the best of my (our) knowledge and that the project or activity complies with rules of the Future Fisheries Improvement Program.

Applicant Signature:			
Sponsor (if applicable):			

*Highlighted boxes will automatically expand.

Mail To: Montana Fish, Wildlife & Parks

Habitat Protection Bureau

PO Box 200701

Helena, MT 59620-0701

Incomplete or late applications will be returned to applicant.

Applications may be rejected if this form is modified.

Applications may be submitted at anytime, but must be received by the Future Fisheries Program office in Helena <u>before</u> December 1 and June 1 of each year to be considered for the subsequent funding period.